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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,779	09/13/2000	Takashi Yanagisawa	PM271727	1834

909 7590 10/18/2002

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EXAMINER

MEINECKE DIAZ, SUSANNA M

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 10/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/600,779

Applicant(s)

YANAGISAWA ET AL.

Examiner

Susanna M. Diaz

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 46-92 is/are pending in the application.
- 4a) Of the above claim(s) 52-66 and 75-92 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 46-51 and 67-74 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8, 10, 12, 14 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Non-Final Office action is responsive to Applicant's election of Group I (Claims 46-51 and 67-74) filed on August 14, 2002.

Claims 52-66 and 75-92 stand as non-elected claims and are therefore withdrawn from consideration.

Claims 46-51 and 67-74 are presented for examination.

### ***Information Disclosure Statement***

2. Applicant's Information Disclosure Statements (Paper Nos. 8, 10, 12, and 14), filed on July 5, 2001, December 12, 2001, January 14, 2002, and January 15, 2002, have been considered and a copy of the signed PTO-1449 forms are attached to the present office action.

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Art Unit: 3623

4. The abstract of the disclosure is objected to because it is not limited to a single paragraph. Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because it contains several tables for which the entire text is written vertically. Tables are allowed in the specification as long as they conform to the proper format of the specification. In this case, however, the following tables appear more to be drawings and should therefore either be adjusted so that the entire text is written horizontally, be deleted from the specification and incorporated as drawings, or be deleted entirely from the application (see 37 C.F.R. § 1.58(a)):

Page 94, Table 3

Page 102, Table 5

Page 138, Table 6

Page 178, Table 9

Page 190, Table 11

Page 212, Table 13

Page 213, Table 14

Page 214, Table 15

Page 238, Table 17

Page 239, Table 18

Page 240, Table 19

Page 249, Table 20

Appropriate correction is required.

***Drawings***

6. The drawings are objected to because, for Figures 21, 43, 55-57, 60, 62, 63, and 67-69, more than one figure is present and each figure is not labeled "Fig." with a consecutive Arabic numeral (1, 2, etc.) or an Arabic numeral and capital letter in the English alphabet (A, B, etc.)(see 37 CFR 1.84(u)(1)). For example, there are two parts to Figure 21 -- Figure 21 and Figure 21 (CONTINUED). Instead, Figure 21 and Figure 21 (CONTINUED) should be labeled as "Figure 21A" and "Figure 21B," respectively. The same objection applies to Figures 43, 55-57, 60, 62, 63, and 67-69. Further, all references to these figures in the specification should be adjusted accordingly.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Objections***

7. Claim 70 is objected to because of the following informality:

Claim 70, line 2, delete "comprises", insert --comprising--

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3623

9. Claims 50, 51, 67-69, 70, and 71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 50 recites "transmitting position information of the host moving body to the ground side" (line 4). It is not clear what is meant by "the ground side." For example, does "the ground side" refer to the vehicle or a ground station for the wireless position locator (e.g., GPS)? For examination purposes, "the ground side" will be interpreted as referring to either the vehicle or a ground station for the wireless position locator (e.g., GPS).

Claim 67 recites "transmitting the charge history of the charge information generated by the generating means to the ground side" (lines 15-16). First, there is no antecedent basis for "the generating means." Second, it is not clear what is meant by "the ground side." For example, does "the ground side" refer to the vehicle or a ground station for the wireless position locator (e.g., GPS)? For examination purposes, "the generating means" will be interpreted as "the making means" and "the ground side" will be interpreted as referring to either the vehicle or a ground station for the wireless position locator (e.g., GPS).

Claim 68 states that "the making means is formed from generating means for generating charge information"; however, independent claim 67 recites that the making means are for generating charge information. It is not clear what the difference is, if any, between the making means and the generating means. Please clarify.

Claim 70 recites “transmitting the charge history of the charge information generated by the generating means to the ground side” (lines 16-17). First, there is no antecedent basis for “the generating means.” Second, it is not clear what is meant by “the ground side.” For example, does “the ground side” refer to the vehicle or a ground station for the wireless position locator (e.g., GPS)? For examination purposes, “the generating means” will be interpreted as “the making means” and “the ground side” will be interpreted as referring to either the vehicle or a ground station for the wireless position locator (e.g., GPS).

Claim 71 recites that “the on-line road communication means is further provided with altering means for altering the amount of charge settlement based on a time until an arrival in the processing area.” It is not clear what is meant by this limitation. For example, is the actual charge settlement carried out before reaching the processing area or upon reaching the processing area? Further, does this limitation merely refer to the ability to charge based on a duration of time traveled in a toll zone (i.e., “a time until an arrival in the processing area”)? For examination purposes, this limitation will be interpreted as merely referring to the ability to charge based on a duration of time traveled in a toll zone.

Claim 51 is dependent from claim 50 and therefore inherits the same rejection under 35 U.S.C. 112, 2<sup>nd</sup> paragraph.

Claim 69 is dependent from claim 67 and therefore inherits the same rejections under 35 U.S.C. 112, 2<sup>nd</sup> paragraph.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

11. Claims 46-50 and 67-74 are rejected under 35 U.S.C. 102(e) as being anticipated by Widl (U.S. Patent No. 5,721,678).

Widl discloses a charge processing device comprising:

[Claim 46] detecting means for detecting position information indicating a position where a moving body is located (col. 3, lines 14-50);

matching means for matching the position information with predetermined map information (col. 3, lines 51-65; col. 4, lines 21-46 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones);



setting means for, based on the map information, setting an area where a charge is applied which area corresponds to a predetermined area in the map information (col. 3, lines 51-65; col. 4, lines 21-67 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones);

deciding means for, based on a result of a matching by the matching means, deciding an entry state indicating whether or not the moving body has at least entered into the area where a charge is applied (col. 3, lines 51-65; col. 4, lines 21-46 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones); and

generating means for generating, based on a result of a deciding by the deciding means, charge information for the moving body (col. 4, lines 21-67);

[Claim 47] the charge processing device further comprising location information detecting means for detecting, based on the position information, location information indicating date and time the moving body is located in the area in which a charge is applied, wherein the deciding means decides, based on the result of the matching by the matching means and a result of a detection by the location information detecting means, the entry state including a location state of the moving body within the area in which a charge is applied (col. 4, lines 21-67; col. 5, lines 25-34 – The toll charge may

Art Unit: 3623

be based on a season or time of day during which travel occurs, thereby indicating date and time the moving body is located in the charge area);

[Claim 48] wherein the generating means decides the entry state including a congestion state caused by moving bodies located in the area in which a charge is applied (col. 5, lines 30-34 – “For instance, a sensible variant would be to apply lower rates for individual sections of road or for the entire highway system during off-peak traffic times...in order to reduce traffic at peak periods by a suitable shifting of traffic”);

[Claim 49] wherein the generating means is further provided with storage means in which predetermined toll data corresponding to the entry state is stored in advance, and the generating means generates the charge information using the toll data in the storage means (col. 3, lines 51-56; col. 4, line 57 through col. 5, line 24 – Toll rates specific to each vehicle can be stored in advance in the vehicle’s mobile storage medium).

Widl’discloses a charge processing device comprising:

[Claim 50] host position detecting means for detecting a position of a host moving body (col. 3, lines 14-50);

transceiving means for, by wireless communication, transmitting position information of the host moving body to the ground side, and for receiving charge data relating to an area where a charge is applied which area is set based on predetermined map information in correspondence with a predetermined area in the map information (col. 3, lines 14-65; col. 4, lines 21-46 – Widl’s toll system detects when a vehicle has

Art Unit: 3623

entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones); and

charge processing means for performing charge processing relating to the area in which a charge is applied, at a predetermined period and based on a result of a transmission and reception by the transceiving means (col. 3, lines 14-65; col. 4, lines 21-46 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones), wherein

the host position detecting means, the transceiving means, and the charge processing means are able to be mounted on a moving body (col. 3, lines 51-56; col. 4, lines 57-60).

Widl discloses a charge processing device comprising:

[Claim 67] detecting means for detecting position information indicating a position where a moving body is located (col. 3, lines 14-50);

matching means for matching predetermined map information and the position information (col. 3, lines 51-65; col. 4, lines 21-46 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones);

setting means for, based on the map information, setting an area where a charge is applied which area corresponds to a predetermined area in the map information (col. 3, lines 51-65; col. 4, lines 21-67 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones);

deciding means for, based on a result of a matching by the matching means, deciding an entry state indicating whether or not the moving body has at least entered into the area where a charge is applied (col. 3, lines 51-65; col. 4, lines 21-46 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones); and

making means for, based on a result of a decision by the deciding means, generating charge information for the moving body in the area where a charge is applied, as well as making, at a predetermined period, a charge history of the generated charge information (col. 4, lines 47-67; col. 6, lines 6-9); and

transmitting means for transmitting the charge history of the charge information generated by the generating means to the ground side (col. 4, lines 47-67; col. 6, lines 6-9);

[Claim 68] wherein the making means is formed from generating means for generating charge information for each of a plurality of existing areas where a charge is

Art Unit: 3623

applied, and accumulating means for accumulating in sequence the generated charge information as charge history (col. 4, lines 47-67; col. 6, lines 6-9);

[Claim 69] wherein the detecting means detects the position information using satellite signals from satellites (col. 3, lines 14-50).

Widl discloses a charge processing device comprising:

[Claim 70] in-vehicle communication means comprising (Fig. 2; col. 3, lines 8-65):

detecting means for detecting position information indicating a position where a moving body is located (col. 3, lines 14-50);

matching means for matching predetermined map information and the position information (col. 3, lines 51-65; col. 4, lines 21-46 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones);

setting means for, based on the map information, setting an area where a charge is applied which area corresponds to a predetermined area in the map information (col. 3, lines 51-65; col. 4, lines 21-67 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones);

deciding means for, based on a result of a matching by the matching means, deciding an entry state indicating whether or not the moving body has at least entered

Art Unit: 3623

into the area where a charge is applied (col. 3, lines 51-65; col. 4, lines 21-46 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones); and

making means for, based on a result of a decision by the deciding means, generating charge information for the moving body in the area where a charge is applied, as well as making, at a predetermined period, a charge history of the generated charge information (col. 4, lines 47-67; col. 6, lines 6-9); and

transmitting means for transmitting the charge history of the charge information generated by the generating means to the ground side (col. 4, lines 47-67; col. 6, lines 6-9),

wherein the transmission means transmits charge history in accordance with an input transmission request (col. 4, lines 47-67; col. 6, lines 6-9 – There must be some sort of input, e.g., manual or triggered by an electronic communication, to initiate transmission of the charge history, especially since there are various optional modes for charge reporting and billing), and,

on-road communication means having request means for performing the transmission request and processing means for performing charge settlement processing in a predetermined processing area and based on a transmitted charge history (col. 4, lines 47-67; col. 5, lines 1-24; col. 6, lines 6-9);

Art Unit: 3623

[Claim 71] wherein the on-line road communication means is further provided with altering means for altering the amount of charge settlement based on a time until an arrival in the processing area (col. 5, lines 25-28).

Widl discloses a charge processing device comprising:

[Claim 72] detecting means for detecting position information indicating a position where a moving body is located (col. 3, lines 14-50);

storage means capable of being inserted and removed for storing a predetermined area in which a charge is applied which area is set based on predetermined map information in correspondence with a predetermined area in the map information (Fig. 2; col. 3, lines 51-65; col. 4, lines 21-67 – Widl's toll system detects when a vehicle has entered and exited a fixed toll zone, thereby implying a correlation between the vehicle's position and predetermined toll zone information, i.e., a predetermined mapping of fixed toll zones. The billing system is carried onboard the vehicle as part of a mobile unit and can therefore be removed from or placed in the vehicle. Further, different toll cards can be used for different charging rates, e.g., based on the vehicle type); and

generating means for, at a predetermined period, generating charge information for the moving body based on a result of a detection by the detecting means and the area in which a charge is applied stored in the loaded storage means (col. 4, lines 18-67; col. 6, lines 6-9);

[Claim 73] wherein the generating means is provided with a reading means for reading a result of a detection by the detecting means and the area in which a charge is applied stored in the storage means, and generates charge information from the read position information and the area in which a charge is applied (col. 4, lines 18-67; col. 6, lines 6-9);

[Claim 74] wherein the storage means is a toll card on which is stored the area in which a charge is applied for generating at least one charge information (col. 4, lines 47-67).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Widl (U.S. Patent No. 5,721,678), as applied to claim 50 above.

[Claim 51] Widl discloses the use of a rechargeable "highway toll card" for making toll payments (col. 4, line 47 through col. 5, line 24), yet Widl fails to explicitly teach the use of an IC card for making toll payments. However, Official Notice is taken that the use of IC cards to make toll payments is old and well-known in the art of toll processing. IC cards provide for a convenient and secure way of transferring funds, especially in a wireless payment system. Further, IC cards are not as susceptible to damage or fraud



Art Unit: 3623

as their predecessors, such as magnetic payment cards. Therefore, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to utilize an IC card as Widl's "highway toll card" to store a user's balance information in order to provide for a convenient and secure way of storing and transferring funds wirelessly while minimizing susceptibility to damage or fraudulent accounting activity.

### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (703) 305-1337. The examiner can normally be reached on Monday-Friday, 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703)308-1113.

Any response to this action should be mailed to:

***Commissioner of Patents and Trademarks  
Washington D.C. 20231***

or faxed to:

**(703)305-7687** [Official communications; including  
After Final communications labeled  
"Box AF"]

**(703)746-7048** [Informal/Draft communications, labeled

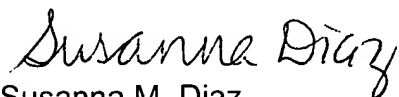
Application/Control Number: 09/600,779

Page 17

Art Unit: 3623

"PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 22202, 7<sup>th</sup> floor receptionist.



Susanna M. Diaz  
Patent Examiner  
Art Unit 3623  
October 1, 2002